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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,933	01/09/2004	Norman Paul Jouppi	200312802-1	9240
22879 7590 12/31/2007 HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			EXAMINER PAUL, DISLER	
			ART UNIT 2615	PAPER NUMBER
			NOTIFICATION DATE 12/31/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<b>Office Action Summary</b>	<b>Application No.</b> 10/754,933	<b>Applicant(s)</b> JOUPI ET AL.	
	<b>Examiner</b> Disler Paul	<b>Art Unit</b> 2615	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9;20-24;25-28 is/are rejected.
- 7) ☐ Claim(s) 10-16;17-19 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/9/04</u> . | 6) <input type="checkbox"/> Other: ____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments filed file on 10/1/07 with respect to claims 1-3, 9, 21-23 wherein the "controls microphones and not speakers coming from a person's head" have been fully considered but they are not persuasive. Notice, as broadly claimed by the applicant, Amir et al. disclosed of **having a sound field wherein the speaker with gains is adjusted based on the determined position of the person's head with microphone** (see fig.1-4; par[0009,0010] and thus as Amir et al. did indeed disclose of the above feature, and applicant maintain rejection.

2.

Similarly, Re claims 14, in regard to the limitation wherein "audio signals is multiplied by a factor ...." is persuasive, thus will be further considered over prior arts.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9; 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jouppi ("2002/0141595 A1") and Amir et al. ("2002/0090094 A1").

Re claim 1, Jouppi disclose of a system for audio reproduction comprising: means for obtaining one or more audio signals that are

representative of sounds occurring at a first location ("fig.1/60; page 2[0026] line 1-6; page 2[0028] line 1-5"); means for communicating the audio signals from the first location to a second location of a person ("fig.1/74; page 2[0023]") and plural means for reproducing audio field at the second location from the audio signals ("page 2[0030] & page 3[0036]"). While Jouppi disclose of the above, He fail to further disclose of the means for determining a position of the head of the person in at least two dimensions at the second location by imaging the person.

However, Amir et al. disclose of a system wherein the similar concept of having means for determining a position of the head of the person in at least two dimensions at the second location by imaging the person ("fig.1; fig.1 (18); fig.2") for the purpose of adjusting the gain of the transducer based on the head movement. Thus, taking the combined teaching of Jouppi and Amir et al. as a whole, it would have been obvious for one of the ordinary skill in the art to modify Jouppi by incorporating the means for determining a position of the head of the person in at least two dimensions at the second location by imaging the person for the purpose of adjusting the gain of the transducer based on the head movement.

The combined teaching of Jouppi and Amir et al. as a whole, further teach of the sounds emitted by each means for reproducing are

controlled based on the position of the head of the person ("fig.1 ((14,18,24,26); fig.3-4; page 3[0027] line 16-20, par[0030], par[0009,0010]").

Re claim 2, the system according to claim 1, wherein the audio field is reproduced in real time ("Amir, page 3[0029]").

Re claim 3, the system according to claim 1, wherein said means for determining repeatedly determines the position of the person and wherein said means for reproducing is continuously controlled in response to changes in the position of the head of the person ("abstract, page 1[0007] line 15-18/precise adjustment based on speaker movement denote continuity and repetitiveness").

Re claim 4, the system according to claim 1, wherein the position of the head of the person is determined in horizontal directions and wherein volume for reproduction by each means for reproducing is controlled based on the horizontal distance between the head of the person and the means for reproducing ("Amir, fig.1(18,28); par[0030]/head orientations with microphones and sound produced").

Re claim 5, the system according to claim 4, wherein each of the plural means for reproducing comprises a speaker ("Jouppi, page 2[0030]").

Re claim 6, the system according to claim 4, further teach of the wherein each of the plural means for reproducing comprises at least a pair of vertically arranged speakers ("Jouppi, page 2[0030]").

Re claim 7, the system according to claim 1, wherein the position of the person is determined in three dimensions, including horizontal and vertical directions ("page 3[0029-0030] line 8-15; fig.2-4/video detectors for multidimensional positions").

Re claim 8 has been analyzed and rejected with respect to claim 6.

Re claim 9, the combined teaching of Jouppi and Amir et al. as a whole would have incorporate, further teach of the system according to claim 8, wherein the volume of reproduction by each of a pair of vertically arranged speakers is based on the position of the head of the person in the vertical direction ("Amir, fig.1-4(46,54)/video to incorporate multi-dimensional head movement").

Re claim 20, the system according to claim 1, further comprising means for displaying visual images to the user including a source of the sounds("page 2[0022] line 3-7/screens").

Re claim 21, Jouppi disclose a method for audio reproduction comprising: obtaining one or more audio signals that are representative of sounds occurring at a first location ("fig.1/60; page 2[0026] line 1-6; page 2[0028] line 1-5"); communicating the audio signals from the first location to a second location of a person("fig.1/74; page 2[0023]") and plural means for reproducing audio field at the second location from the audio signals ("page 2[0030] & page 3[0036]"). However, Jouppi fail to disclose of the determining a position of the head of the person in at least two dimensions at the second location by imaging the person.

However, Amir et al. disclose of a system wherein the determining a position of the head of the person in at least two dimensions at the second location by imaging the person ("fig.1; fig.1 (18); fig.2") for the purpose of adjusting the gain of the transducer based on the head movement. Thus, taking the combined teaching of Jouppi and Amir et al. as a whole, it would have been obvious for one of the ordinary skill in the art to modify Jouppi by incorporating the determining a position of the head of the person in at least two dimensions at the

second location by imaging the person for the purpose of adjusting the gain of the transducer based on the head movement.

The combined teaching of Jouppi and Amir et al. as a whole, further teach of the wherein sounds emitted by each of plural means for reproducing are controlled based on the position of the head of the person ("fig.1 (24,26; page 2[0024] line 8-14; fig.4; page 3[0027] line 16-20").

Re claim 22, the method according to claim 21, wherein volume of reproduction is controlled based on the position of the head of the person ("fig.1 (18)").

Re claim 23, the method according to the claim 21, However, the combined teaching of Jouppi and Amir et al. as a whole, fail to disclose of the delay associated with volume of reproduction by each means for reproducing is controlled based on the positions of the head of the person. But, Amir et al. did disclose of the gain being adjusted based on the distance from the person's mouth and orientation of the head ("page 1[0010], thus it is inherent that there must exist a delay associated with volume of reproduction by each means for



reproducing is controlled based on the positions of the head of the person.

Re claim 24, the method according to claim 21, wherein the audio field is controlled based on the position of the person's head in three dimensions ("page 3[0029] line 8-15; fig.2-4/video detectors for multidimensional positions").

4. Claim 25-28 rejected under 35 U.S.C. 103(a) as being unpatentable over Schulz ("7,092,001 B2") and Amir et al. ("2002/0090094 A1").

Re claim 25, Schulz disclose of a telepresence system comprising: a display booth having a plurality of cameras for obtaining images of a person within the display booth ("fig.1(104/with fig.2 (220); col.12 line 33-40/room as the booth"); a computer system for determining a position of the head of the person in at least two dimensions from the images of the person("fig.8,10; col.5 line 38-45; col.8 line 23-34; line 43-47; col.9 line 40-50/video camera to monitor physical presence of persons"). But, Schulz fail to disclose of the plurality of speakers for reproducing an audio field at the display booth, wherein the audio field is controlled based on the position of the head of the person.

However, Amir disclose of a system wherein the plurality of speakers for reproducing an audio field at the display booth, wherein the audio field is controlled based on the position of the head of the person ("fig.1; fig.1 (18); fig.2") for the purpose of adjusting the gain of the transducer based on the head movement. Thus, taking the combined teaching of Schulz and Amir et al. as a whole, it would have been obvious for one of the ordinary skill in the art to modify Schulz by incorporating the plurality of speakers for reproducing an audio field at the display booth, wherein the audio field is controlled based on the position of the head of the person for the purpose of adjusting the gain of the transducer based on the head movement.

Re claim 26, the telepresence system according to claim 25, wherein volume of reproduction by each speaker is controlled based on the position of the head of the person ("Amir,fig.1(18)").

Re claim 27, the method according to the claim 25, However, the combined teaching of Schulz and Amir et al. as a whole, fail to disclose of the delay associated with volume of reproduction by each means for reproducing is controlled based on the positions of the head of the person. But, Amir did disclose of the gain being adjusted based on the distance from the person's mouth and orientation of the head ("page 1[0010], thus it is inherent that there must exist a delay

associated with volume of reproduction by each means for reproducing is controlled based on the positions of the head of the person.

Re claim 28 the telepresence system according to claim 25, wherein the audio field is controlled based on the position of the person's head in three dimensions ("page 3 [0029] line 8-15; fig.2-4/video detectors for multidimensional positions").

#### ***Allowable Subject Matter***

5. Claims 10-16, 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Disler Paul whose telephone number is 571-270-1187. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published

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